

CLAIMS

1. A recording medium, comprising:
a data area including at least two data sections; and
a linking area to link neighboring data sections, the linking area including scrambled user data produced by scrambling user data with a scrambling key.
2. The recording medium of claim 1, wherein the scrambled user data has a lower digital sum value than the user data.
3. The recording medium of claim 1, wherein the scrambling key is at least a portion of a frame synch signal.
4. The recording medium of claim 1, wherein the scrambling key is repeating pattern of bits.
5. The recording medium of claim 1, wherein the scrambling key is at least part of a physical address.
6. The recording medium of claim 5, wherein the physical address is part of the linking area.
7. The recording medium of claim 5, wherein the physical address is part of a previous physical cluster.
8. The recording medium of claim 5, wherein the physical address is part of a subsequent physical cluster.
9. The recording medium of claim 5, wherein the physical address includes the scrambling key having a predetermined number of bytes.

10. The recording medium of claim 1, wherein the linking area further includes parity data and/or a frame synch signal.

11. The recording medium of claim 1, wherein the linking area further includes scrambled physical address data, scrambled parity data, and/or scrambled frame synch signal data.

12. The recording medium of claim 1, wherein the user data includes anti-piracy and/or control information.

13. A method of forming a recording medium, comprising:
scrambling user data with a scrambling key; and
writing the scrambled user data in a linking area to link neighboring data sections of a data area on the recording medium.

14. A method of claim 13, wherein the scrambling key is part of a physical address of a previous physical data section.

15. A method of claim 13, wherein the scrambling key is part of a physical address of a subsequent physical data section.

16. A method of claim 13, wherein the scrambling key is part of a physical address of a previous and a subsequent physical data section.

17. A method of claim 13, wherein the scrambling key is part of a physical address of a current physical data section.

18. A method of reproducing data from a recording medium, comprising:
utilizing a linking area, including scrambled user data, which links neighboring data sections of a data area, to reproduce the data.

19. A method of claim 18, wherein the scrambled user data has been scrambled using scrambling key data included in a previous physical data section.

20. A method of claim 19, wherein the scrambled user data has been scrambled using scrambling key data included in a physical address being part of a previous physical data section.

21. A method of claim 19 or 20, wherein the scrambling key data is used to descramble the scrambled user data.

22. A method of claim 21, wherein the utilizing step includes step for descrambling the scrambled user data using the scrambling key data.

23. A method of claim 18, wherein the scrambled user data has been scrambled using a scrambling key data included in a current physical data section.

24. A method of claim 23, wherein the scrambled user data has been scrambled using a scrambling key data included in a physical address being part of a current physical data section.

25. A method of claim 23 or 24, wherein the scrambling key data is used to descramble the scrambled user data.

26. A method of claim 25, wherein the utilizing step includes step for descrambling the scrambled user data using the scrambling key data.

27. A method of recording data on a recording medium, comprising:
utilizing a linking area, including scrambled user data, which links neighboring data sections of a data area, to record the data.

28. A method of claim 27, wherein the scrambled user data is scrambled with a scrambling key included in a part of a previous physical data section.

29. A method of claim 27, wherein the scrambled user data is scrambled with a scrambling key included in a physical address, which is a part of a previous physical data section.

30. A method of claim 27, wherein the scrambled user data is scrambled with a scrambling key included in the physical address, which is part of a subsequent physical data section.

31. A method of claim 27, wherein the scrambled user data is scrambled with a scrambling key included in the physical address, which is part of a previous and subsequent physical data sections.

32. A method of claim 27, wherein the scrambled user data is scrambled with a scrambling key included in the physical address, which is part of a current physical data section.

33. An apparatus for reproducing data from a recording medium, said apparatus utilizing a linking area, including scrambled user data, which links neighboring data sections of a data area, to reproduce the data.

34. The apparatus of claim 33, further comprising:
a scrambler for receiving user data and a scrambling key to produce the scrambled user data, and
an adder for adding additional data to the scrambled user data.

35. The apparatus of claim 34, wherein the scrambling key is received from control data included in a previous data section.

36. A method of scrambling data for recording on a recording medium, comprising:
loading a partial physical address into a shift register;
outputting a scrambling byte for each shift of the shift register; and
combining each scrambling byte with a byte of user data.

37. A method of constructing a linking frame on a recording medium, comprising:

scrambling user data with a scrambling key

combining additional data with the scrambled user data; and

writing the combined scrambled data as the linking frame to link neighboring data sections of a data area on the recording medium.